

SUPPLEMENTAL ACTION

Claim 23 was entered in error as an examiner's amendment in Notice of Allowance filed 17 September 2009. Claim 23 should have been cancelled which necessitated this supplemental action.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James Kayden on 09/04/2009.

The application has been amended as follows:

Claim 1, (entire claim):

A method for scheduling packets in a wireless telecommunication system, comprising:

dividing user packet queues to be transmitted into user packet queues with packet loss and user packet queues without packet loss;

for the user packet queues with packet loss, if a real time loss ratio of packets s for a user exceeds a predetermined packet loss ratio threshold ~~of packet~~, terminating ~~the a~~ connection to the user;

if the real time loss ratio of packets s for the user does not exceed the predetermined packet loss ratio threshold ~~of packet~~, scheduling the user packet queues according to a volume of the loss ratio of packets s, giving priority to scheduling the user packet queues with high loss ratio of packets s; and

for the user packet queues without packet loss, scheduling according to packet lengths, channel quality states, time delays and time delay jitters.

Claim 2. (entire claim):

The method of scheduling packets s in a wireless telecommunication of claim 1, wherein said step of dividing user packet queues to be transmitted into the user packet queues with packet loss and the user packet queues without packet loss further includes the steps of:

obtaining related information, required for scheduling, including the channel quality states, the lengths of all packets to be transmitted, maximum delay thresholds for all packets, delay waiting time for all packets, real time loss ratios of packets for all users, real time loss ratio thresholds of packets for all users, time delay jitters for all packets and maximum time delay jitter thresholds for all packets;

judging whether the real time loss ratio of packetss for each of users is more than 0, if yes, categorizing the user packet into the user packet queues with packet loss; if not, categorizing the user packet into the user packet queues without packet loss.

Claim 3:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

(Line 7)

The phrase: "...delay waiting time of packet..."

Changed to: "...delay waiting time of packetss..."

(Line 7)

The phrase: "...time delay jitter of packet..."

Changed to: "...time delay jitter of packetss..."

(Line 8)

The phrase: "...time delay jitter threshold of packet..."

Changed to: "...time delay jitter threshold of packetss..."

Claim 4:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

(Lines 6-7)

The phrase: "...delay waiting time of packet..."

Changed to: "...delay waiting time of packetss..."

(Line 7)

The phrase: "...time delay jitter of packet..."

Changed to: "...time delay jitter of packetss..."

(Line 7-8)

The phrase: "...time delay jitter threshold of packet..."

Changed to: "...time delay jitter threshold of packetss..."

Claim 5:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 6:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 7:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 10 (entire claim):

A method of scheduling packetss in wireless telecommunication system,
comprising;

reading data of packets to be transmitted into buffers of a queue, and dividing the packets into packets with time delay jitter and time delay limitation, packets only with time delay limitation, and packets without time delay limitation, wherein the packets with time delay jitter and time delay limitation, the packets only with time delay limitation, and the packets without time delay limitation having have priority levels from high to low;

for the packets with time delay jitter and time delay limitation, scheduling the data of packets according to the priority levels by using a method for scheduling packetss comprising;

dividing user packet queues to be transmitted into user packet queues with packet loss and user packet queues without packet loss;

for the user packet queues with packet loss, if a real time loss ratio of packets s for a user exceeds a predetermined packet loss ratio threshold ~~of packet~~, terminating the a connection to the user;

if the real time loss ratio of packets s for the user does not exceed the predetermined packet loss ratio threshold ~~of packet~~, scheduling the user packet queues according to a volume of the loss ratio of packets s, giving priority to scheduling the user packet queues with high loss ratio of packets s; and

for the user packet queues without packet loss, scheduling according to packet lengths, channel quality states, time delays and time delay litters;

then, judging whether a code channel assigned in a scheduling period of a transmission time interval or an overall power used exceeds a predetermined upper limit,

if yes, completing the scheduling period of one transmission time interval for the packet,

if not, reading new data to be transmitted and continuing scheduling a packet service in the scheduling period of the transmission time interval; and

reading new data to be transmitted to start scheduling a packet service in a scheduling period of the following transmission time interval.

Claim 11 (entire claim):

The method of scheduling packets s in wireless telecommunication system of claim 10, wherein said step of dividing the packets further includes steps of:

judging whether there is a packet service sensitive to time delay in the data of packets in the queue;

if ~~no~~ **it is judged that there is no packet service sensitive to time delay in the data of packets in the queue**, indicating that the packet service in the queue is a packet without time delay limitation, the packet without time delay limitation having a lowest priority level;

if **yes it is judged that there is a packet service sensitive to time delay in the data of packets in the queue**, further judging whether there is a packet service sensitive to time delay jitter in the packet service sensitive to time delay,

if **yes it is judged that there is a packet service sensitive to time delay jitter in the packet service sensitive to time delay**, the packet service sensitive to time delay jitter being a packet with time delay jitter and time delay limitation, the packet with time delay jitter and time delay limitation having a highest priority level;

if ~~no~~ **it is judged that there is no packet service sensitive to time delay jitter in the packet service sensitive to time delay**, the packet service sensitive to time delay jitter being a packet only with time delay limitation, the packet only with time delay limitation having a moderate priority level.

Claim 12:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packets..."

Claim 13:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 14:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 15:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 16:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 17:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 18:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 19:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 20:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 21:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 22:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 24:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

(Line 2)

The phrase: "...time delay jitter of packet..."

Changed to: "...time delay jitter of packetss..."

(Line 6)

The phrase: "...delay waiting time of packet..."

Changed to: "...delay waiting time of packetss..."

Claim 25:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

(Line 2)

The phrase: "...time delay jitter of packet..."

Changed to: "...time delay jitter of packetss..."

(Line 6)

The phrase: "...delay waiting time of packet..."

Changed to: "...delay waiting time of packetss..."

Claim 27:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

(Line 2)

The phrase: "...time delay jitter of packet..."

Changed to: "...time delay jitter of packetss..."

(Line 6)

The phrase: "...delay waiting time of packet..."

Changed to: "...delay waiting time of packetss..."

Claim 28:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

(Line 2)

The phrase: "...time delay jitter of packet..."

Changed to: "...time delay jitter of packetss..."

(Line 6)

The phrase: "...delay waiting time of packet..."

Changed to: "...delay waiting time of packetss..."

Claim 29:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

Claim 30:

(Line 1)

The phrase: "The method of scheduling packet..."

Changed to: "The method of scheduling packetss..."

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

Anandakumar et al. (US Pub No. 2006/0039280) a real time loss ratio of packets for a user exceeds a predetermined packet loss ratio threshold ([0163]).

Golestani (US Patent No. 5,121,383) teaches **dividing user packet queues to be transmitted into user packet queues with packet loss and user packet queues without packet loss** (Col. 4, lines 22-43).

Wang et al. (US Pub. No. 2004/0156354) teaches **scheduling according to packet lengths, channel quality states, time delays and time delay jitters** (Paragraphs [0021, 0023]).

Lahr (US Pub. No. 2002/0023165) teaches **giving priority to scheduling the user packet queues with high loss ratio of packets** ([0006]).

However, as per claims 1 and 10, the prior art taken individually or in combination fails to particularly disclose, fairly suggest, or render obvious the following claimed features of:

for the user packet queues with packet loss, if a real time loss ratio of packets for a user exceeds a predetermined packet loss ratio threshold, terminating a connection to the user;

if the real time loss ratio of packets for the user does not exceed the predetermined packet loss ratio threshold, scheduling the user packet queues according to a volume of the loss ratio of packets, giving priority to scheduling the user packet queues with high loss ratio of packets.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA CLIFTON whose telephone number is (571)270-7156. The examiner can normally be reached on Monday-Friday, 9:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.C./
Examiner, Art Unit 2465

/Alpus H. Hsu/
Primary Examiner, Art Unit 2465